pursue the subject matter thereof in a continuing application.

Please add new claim 19 as follows:

19. (New) A substantially purified extracellular domain of the human neu gene product, said product being detectable in a biological fluid by its immunoreactivity with a monoclonal antibody or immunoreactive fragment thereof produced by the hybridoma cell line
    (a) OD-3, having ATCC accession number HB 10204;
    (b) NB-3, having ATCC accession number HB 10205; or
    (c) TA-1, having ATCC accession number HB 10206.

REMARKS

Applicants have hereinabove canceled claim 1 without prejudice, and have added new claim 19. New claim 19 corresponds to claim 1. Support for new claim 19 can be found in the specification at, *inter alia*, page 6, lines 9 through 15, page 9, lines 7 through 18, page 10, lines 29-35, page 36, line 18 through page 38, line 21 and Figures 11-18. Applicants maintain that the addition of this new claim raises no issue of new matter and respectfully request entry of this Amendment. Upon entry of this Amendment, claim 19 will be pending and under examination.

In view of the arguments set forth below, applicants maintain that the Examiner's objections and rejections made in the July 5, 2002 Final Office Action have been overcome, and respectfully request that the Examiner reconsider and withdraw same.

Rejection Under 35 U.S.C. §112, Second Paragraph

The Examiner rejected claim 1 under 35 U.S.C. §112, second paragraph, as allegedly indefinite. Applicants understand this rejection to apply to new claim 19, corresponding to canceled claim 1. Specifically, the Examiner asserted that the phrase "corresponds substantially" is unclear.

In response, applicants respectfully traverse the Examiner's rejection, pointing out that the language objected to by the Examiner does not appear in new claim 19.

In view of the above remarks, applicants maintain that new claim 19 satisfies the requirements of 35 U.S.C. §112, second paragraph.

Rejection Under 35 U.S.C. §112, First Paragraph

The Examiner rejected claim 1 under 35 U.S.C. §112, first paragraph, as allegedly containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. Specifically, the Examiner asserted that applicants did not have possession of each and every "p100" having the properties set forth in claim 1. Applicants understand this rejection to apply to new claim 19, corresponding to canceled claim 1.

In response, applicants respectfully traverse the Examiner's rejection, pointing out that the term "p100" does not appear in new claim 19.

In view of the above remarks, applicants maintain that new claim 19 satisfies the requirements of 35 U.S.C. §112, first paragraph.

Rejection Under 35 U.S.C. §102(b)

The Examiner rejected claim 1 under 35 U.S.C. §102(b) as allegedly anticipated by Bernards, et al. (PNAS, Vol. 84, pages 6854-6858, October 1987). Applicants understand this rejection to apply to new claim 19, corresponding to canceled claim 1.

In response to the Examiner's rejection, applicants respectfully traverse.

New claim 19 provides a substantially purified extracellular domain of the human neu gene product, said product being detectable in a biological fluid by its immunoreactivity with a monoclonal antibody or immunoreactive fragment thereof produced by the hybridoma cell line OD-3, NB-3 or TA-1.

To anticipate the invention of claim 19, Bernards would have to teach each and every element thereof. It fails to do this.

Bernards teaches a 100 kDa protein encoded by the *rat* neu oncogene. When a truncated cDNA clone corresponding to the ectodomain, the transmembrane anchor domain and approximately 50 amino acids of the intracellular domain of that oncogene is transfected into a target cell line (CV-1), the resulting 100 kDa protein can be immunoprecipitated by the anti-rat neu (anti-p185) monoclonal antibody 7.16.4.

Bernards does *not* teach that the 100 kDa protein is detectable in a biological fluid by its immunoreactivity with a monoclonal

antibody or immunoreactive fragment thereof produced by the hybridoma cell line OD-3, NB-3 or TA-1. In fact, Bernards does not even teach that the protein is detectable in a biological fluid *at all*. Bernards therefore fails to teach each and every element of the rejected claim.

In view of the above remarks, applicants maintain that new claim 19 satisfies the requirements of 35 U.S.C. §102(b).

Rejections Under 35 U.S.C. §102(e)

The Examiner rejected claim 1 under 35 U.S.C. §102(e) as allegedly anticipated by Hudziak, et al. (U.S. Patent No. 6,015,567). The Examiner also rejected claim 1 under 35 U.S.C. §102(e) as allegedly anticipated by Ring, et al. (U.S. Patent No. 6,054,561). Applicants understand these rejections to apply to new claim 19, corresponding to canceled claim 1.

In response to the Examiner's rejections, applicants respectfully traverse.

To anticipate the invention of new claim 19, each of Hudziak and Ring would have to teach each and every element thereof. Neither reference does this.

Hudziak teaches a process for producing an extracellular portion of the HER2 molecule. This process comprises ligating cDNA encoding a chain terminated mutant of the full-length wild-type HER2 protein into a suitable expression vector, transforming a suitable host (i.e., a bacterium or eukaryotic cell line) with the expression vector and culturing the host under conditions suitable for expression of the DNA and production of the protein.

Like Bernards, Hudziak does *not* teach that the protein is detectable in a biological fluid by its immunoreactivity with a monoclonal antibody or immunoreactive fragment thereof produced by the hybridoma cell line OD-3, NB-3 or TA-1. Also like Bernards, Hudziak does not teach that the protein is detectable in a biological fluid at all. Hudziak therefore fails to teach each and every element of the rejected claim.

Ring teaches a breast cancer-specific antibody designated 520C9 that binds to an approximately *200 kDa* protein identified as "c-erbB-2." Ring does *not* teach a substantially purified *extracellular domain* of the human neu gene product which, as stated on page 6 of the specification, has a molecular weight of about 97 to 115 kDa. Furthermore, Ring teaches no product detectable in a biological fluid by its immunoreactivity with a monoclonal antibody or immunoreactive fragment thereof produced by the hybridoma cell line OD-3, NB-3 or TA-1.

Therefore, neither Ring nor Hudziak teaches each and every element of new claim 19, and therefore, claim 19 is novel over each of these references.

In view of the above remarks, applicants maintain that new claim 19 satisfies the requirements of 35 U.S.C. §102(e).

Summary

In view of the remarks made herein, applicants maintain that the claim pending in this application is in condition for allowance. Accordingly, allowance is respectfully requested.

If a telephone interview would be of assistance in advancing the prosecution of the subject application, applicants' undersigned attorneys invite the Examiner to telephone them at the number provided below.

No fee, other than the $400.00 fee for an extension of time, is deemed necessary in connection with the filing of this Amendment. However, if any additional fee is required, authorization is hereby given to charge the amount of such fee to Deposit Account No. 03-3125.

Respectfully submitted,

I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to:

Assistant Commissioner for Patents
Washington, D.C. 20231.

12/5/02

Alan J. Morrison
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